

**ECONOMIC IMPACT ANALYSIS  
FOR THE  
COMPREHENSIVE PROCUREMENT GUIDELINE V**

**July 2003**

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This document presents the Economic Impact Analysis (EIA) associated with the proposed Comprehensive Guideline for Procurement of Products Containing Recovered Materials V, henceforth, the Comprehensive Procurement Guideline V or CPG V. The document presents the following information: 1) Environmental Protection Agency (EPA) analytical requirements under Executive Order 12866, 2) EPA requirements under the Unfunded Mandates Reform Act of 1995, 3) background information on the regulations governing the CPG, CPG II, CPG III, CPG IV, and CPG V, 4) general provisions of CPG, CPG II, CPG III, CPG IV, and CPG V, 5) summary of benefits for CPG V, 6) summary of costs for CPG V, 7) universe of entities affected by the rule, 8) discussion of cost analysis methodology, 9) discussion of price differentials between recycled and virgin products, 10) regulatory flexibility analysis, and 11) limitations of the analysis.

## I. REQUIREMENTS UNDER EXECUTIVE ORDER 12866

Executive Order 12866 (54 FR 51735, October 4, 1993) requires federal agencies to determine whether a regulatory action is “significant.” The Order defines a “significant” regulatory action as one that is likely to result in a rule that may: (1) have an annual effect on the economy of \$100 million or more or adversely affect, in a material way, the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or state, local, or tribal governments or communities; (2) create serious inconsistency or otherwise interfere with an action taken or planned by another agency; (3) materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients; or (4) raise novel legal or policy issues arising out of legal mandates, the President’s priorities, or the principles set forth in the Executive Order.

EPA estimates that the costs associated with the CPG V are below the \$100 million threshold. However, to enable the Agency to evaluate the potential impact of the CPG V, EPA conducted the Economic Impact Analysis (EIA), discussed below.

## II. UNFUNDED MANDATES

Under Section 202 of the Unfunded Mandates Reform Act of 1995, signed into law on March 22, 1995, EPA must prepare a statement to accompany any rule where the estimated costs to state, local, or tribal governments in the aggregate, or to the private sector, will be \$100 million or more in any one year. Under Section 205, EPA must select the most cost-effective and least burdensome alternative that achieves the objective of the rule and is consistent with statutory requirements. Section 203 requires EPA to establish a plan for informing and advising any small governments that may be significantly impacted by the rule.

EPA has determined that the CPG V does not include a federal mandate that may result in estimated annualized costs of \$100 million or more to either state, local, or tribal governments in the aggregate, or to the private sector.

### III. BACKGROUND

On April 20, 1994, EPA proposed the first Comprehensive Procurement Guideline (59 FR 18852). In the initial CPG, EPA proposed to designate 21 items made with recovered materials for government procurement and to consolidate 5 earlier guidelines in one document. Concurrently, EPA also published a draft Recovered Materials Advisory Notice (RMAN) which recommended recovered materials content ranges within which the designated items are available. The CPG and RMAN implemented Section 6002(e) of the Resource Conservation and Recovery Act (RCRA) and the requirements of Section 502 of Executive Order 13101. EPA promulgated the final CPG on May 1, 1995 and designated the original 5 plus an additional 19 items that are or can be made with recycled materials (60 FR 21370, codified at 40 CFR Part 247).

RCRA Section 6002(e) requires EPA to designate items that are or can be made with recovered materials and to recommend practices for the procurement of designated items by procuring agencies. Once EPA designates an item, Section 6002 requires any procuring agency that purchases \$10,000 or more of that item with appropriated federal funds to develop an affirmative procurement program to assure that the designated item is purchased with the highest percentage of recovered materials practicable. RCRA 1004(17) defines a procuring agency as “any federal agency, or any state agency or agency of a political subdivision of a state which is using appropriated federal funds for such procurement, or any person contracting with any such agency with respect to work performed under such contract.”

Executive Order 13101 sets forth procedures for EPA to follow in implementing Section 6002(e) of RCRA. The Executive Order requires EPA to designate items in a Comprehensive Procurement Guideline and to recommend procurement practices in a related Recovered Materials Advisory Notice. The Executive Order also requires EPA to designate additional items annually. Accordingly, EPA proposed CPG II on November 17, 1996 (61 FR 57748). EPA proposed to designate 13 items: shower and restroom dividers, latex paint, parking stops, channelizers, delineators, flexible delineators, snow fencing, hose(garden and soaker), lawn and garden edging, ink jet cartridges, printer ribbons, plastic envelopes, and pallets. In the final CPG II, EPA designated all of these items except ink jet cartridges. In CPG III (65 FR 3070, January 19, 2000), EPA designated all 18 items originally proposed, including: carpet cushion, flowable fill, railroad grade crossing surfaces, park benches and picnic tables, playground equipment, plastic lumber landscaping timbers and posts, food waste compost, solid plastic binders, plastic clipboards, plastic file folders, plastic clip portfolios, plastic presentation folders, sorbents, industrial drums, awards and plaques, mats, signage, and strapping. On August 28, 2001, EPA proposed to designate 11 items in CPG IV (66 FR 45256), including: bike racks, blasting grit, cement and concrete containing cenospheres, cement and concrete containing silica fume, modular threshold ramps, nonpressure pipe, nylon carpet and nylon carpet backing, office furniture, rebuilt vehicular parts, roofing materials, and tires. CPG IV is due to be finalized in the near future.

This Technical Background Document provides estimated economic impacts upon federal, state, and local governments, as well as private contractors, for the two items proposed for designation in CPG V, including: a revised designation for compost that would include compost made from manure or biosolids, and a new designation for fertilizers made from recovered organic materials. EPA is also proposing to consolidate all compost designations (i.e., for composts made from yard waste, food waste, manure, or biosolids) under one item called “compost made from recovered organic materials.” Although revising an item designation would most likely result in less economic impacts than designating a new item, for the purposes of this EIA EPA is conservatively assuming that the impacts are the same.

#### IV. GENERAL PROVISIONS OF CPG V

CPG V proposes the designation of two items that are or can be made with recovered materials. It would revise the current compost designation to include compost made from manure or biosolids and designate fertilizers made from recovered organic materials. Both of these items fall under the Landscaping Products category.

If EPA promulgates the proposed CPG V designations, procuring agencies would be required to perform several activities. For purposes of this analysis, EPA is dividing these activities as follows: rule review and implementation; estimation, certification, and verification; and, for federal agencies, record-keeping and reporting. The rule review and implementation subsection is further subdivided into three subgroup activities, including Initial review; Policy development, distribution, and implementation; and Specification revision. These requirements are discussed in further detail in Section VIII.

#### V. SUMMARY OF BENEFITS

EPA anticipates that CPG V will result in increased opportunities for recycling and waste prevention. Waste prevention can reduce the nation's reliance on natural resources by reducing the amount of materials used in making products. This may result in a commensurate reduction in energy use, as well as reductions in the generation and release of air and water pollutants associated with manufacturing. Additionally, waste prevention leads to a reduction in the environmental impacts of mining, harvesting, and other extraction processes.

Recycling can effect the more efficient use of natural resources. For many products, the use of recovered materials in manufacturing may result in lower energy and material input costs than when virgin raw materials are used. Aluminum recycling, for instance, can save up to 97 percent of the energy requirements for making new aluminum, as compared to the use of bauxite. Use of recovered materials can also reduce the generation and release of air and water pollutants often associated with manufacturing (including air emissions that contribute to ozone depletion and the generation of "greenhouse gases"). Air pollutant reductions of nearly 25 percent have been associated with the manufacture of glass from recovered materials. When recovered materials are used instead of raw materials, reductions from the manufacture of steel and aluminum can be as high as 85 percent and 95 percent, respectively. Additionally, when recovered materials are used, water pollutant reductions in the manufacture of steel and aluminum can be as high as 75 percent and 95 percent, respectively. Using recovered materials also reduces the environmental impacts of mining, harvesting, and other extraction of natural resources, while conserving non-renewable resources for future use. Recycling can also divert large amounts of materials from landfills, conserving increasingly valuable space for the management of materials that truly require disposal. This reduces the need to expand existing or site new disposal facilities, allowing local government officials to devote more attention to health, education, and safety issues.

By purchasing products made with recovered materials, government agencies will increase opportunities for realizing these benefits. On a national and regional level, CPG V, if promulgated, will result in expanding and strengthening markets for additional materials diverted or recovered through public and private collection programs. Also, since many state and local governments, as well as private

enterprises, reference EPA guidelines when purchasing designated items, CPG V will result in further increased purchasing of recycled products locally, regionally, and nationally.

Finally, purchase and use of recycled products by government agencies will also spur private sector development of new technologies, creating business and employment opportunities that enhance local, regional, and national economies. Technological innovation associated with the use of recovered materials translates into economic growth which makes American industry more competitive in the global economy. EPA has not monetized any of the benefits mentioned above for this CPG V Economic Impact Analysis.

## VI. SUMMARY OF COSTS

As shown in Table 1 below, EPA estimates that the annualized costs of CPG V range from \$1.15 to \$2.31 million, with costs being spread across all procuring agencies (i.e., federal, state, and local agencies that use appropriated federal funds to procure designated items) and their contractors (i.e., federal, state and local government contractors involved with the procurement of designated items). These costs are annualized over a 10-year period at a three percent discount rate. CPG V covers two related items. EPA therefore considered it likely that if an Agency used one item (e.g., compost), it would also use the second item (e.g., fertilizers). A sensitivity analysis examined the effects of all Agencies using only one CPG V item. The costs are half of the best estimated costs and are the lower range cited in the middle column of Table 1.

Table 1. -- Summary of Annualized Costs of CPG V to All Procuring Agencies

Procuring Agency	Total Annualized Costs (\$1000)	BEST ESTIMATE Total Annualized Costs (\$1000)
Federal Agencies	\$577 - \$1,153	\$1,153
States	\$207 - \$413	\$413
Local Governments	\$361 - \$722	\$722
Contractors	\$10 - \$20	\$20
Total	\$1,154 - \$2,308	\$2,308

RCRA Section 6002(g) requires the Office of Federal Procurement Policy (OFPP) to report to Congress every two years on the actions taken by federal agencies to comply with RCRA Section 6002. In developing this report, OFPP requests information and data from federal agencies regarding their affirmative procurement programs and related activities. Table 2 below presents the estimated annualized costs to federal agencies, including (1) specification revision and affirmative procurement program modification/implementation costs, and (2) record-keeping and reporting costs. The record-keeping and

reporting costs presented below are the costs likely to be incurred by federal agencies to maintain and compile information and complete the annual OFPP information request using the existing OFPP reporting format (i.e., the format used to collect information for fiscal years 1993 and 1994).

Table 2. -- Summary of Best Estimate Annualized Costs of CPG V to Federal Agencies

Federal Agency	Specification Revision and APP Costs (\$1000)	Record-keeping and Reporting Costs (\$1000)	Total Annualized Costs (\$1000)
Defense Agencies	\$493	\$182	\$675
Civilian Agencies	\$235	\$244	\$479
Total	\$728	\$426	\$1,154

Note: Numbers do not sum due to rounding.

Many federal agencies have stated that the current OFPP format is too burdensome and costly to complete. To address these concerns, the Office of the Federal Environmental Executive has formed a workgroup which includes representatives from OFPP and several federal agencies to examine methods of streamlining the current reporting format. Based on information and data submitted by two federal agencies, EPA estimates that if OFPP revised the current format to request data on purchases made at and above the small purchase threshold and only anecdotal information on small purchases and bank-card acquisitions, federal record-keeping and reporting costs could be reduced by 75 percent.

## VII. AFFECTED UNIVERSE

RCRA Section 6002 applies to procuring agencies that use at least a portion of federal funds to procure over \$10,000 worth of a designated product in a given year. Based on these criteria, EPA estimates that CPG V would apply to 35 federal agencies, all 56 states and territories and 1,900 local governments. EPA's assumptions on the number of local entities that would be affected were based on information regarding the amount of federal funds that are dispersed to specific local governments. In addition, EPA assumed that as many as 1,000 contractors may be affected.

### A. Federal Agencies

RCRA Section 6002 provides that federal agencies that procure at least \$10,000 annually of a designated item in a given year are subject to the CPG, CPG II, CPG III, CPG IV, and CPG V. For purposes of this analysis, EPA assumed that 35 agencies would be affected. EPA based this assumption on the amount of contract money spent per annum by each Executive agency, as reported in the Federal Procurement Data System (FPDS). The FPDS tracks federal contract actions and dollars by department and agency. The initial report that EPA used in the first CPG was the Federal Procurement Report for Fiscal Year 92, which listed 62 agencies in the Executive branch. Of these agencies, 35 spent more than \$10 million on contracts in 1992. Of the remaining agencies, 26 spent less than \$2 million.

In developing its assumption for the number for federal agencies involved in specification-writing, EPA assumed that 5 of the 35 agencies would actually write specifications for one or more of the designated items. These 5 agencies are the Department of Defense (DoD), Government Services Administration (GSA), Department of the Interior (DOI), Department of Transportation (DOT), and Housing and Urban Development (HUD). A list of the number of federal “specification-writing” agencies potentially affected by the landscaping product category included in CPG V is presented in Table 3 below.

Table 3. -- Number of Federal Specification-Writing Agencies Potentially Affected by CPG V

Product Category	Agencies Potentially Affected	Total Number of Agencies Potentially Affected
Landscaping	GSA, DOD, DOT, DOI, HUD	5

#### B. State Governments

RCRA Section 6002 provides that state agencies that receive appropriated federal funds and that use these funds to procure designated items in quantities of \$10,000 or more in a given year are subject to the CPG, CPG II, CPG III, CPG IV, and CPG V. RCRA Section 1004(31) defines a “state” to include all 50 states, the District of Columbia, the Commonwealth of Puerto Rico, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, and the Virgin Islands.

For purposes of this analysis, EPA assumed that 56 state and territorial governments would be affected, the full universe of state and territorial governments. EPA does not have information as to whether all of these states use appropriated federal funds to purchase more than \$10,000 of one or more items proposed for designation in CPG V. However, for purposes of this analysis, EPA assumed that all 56 state and territorial governments would procure some of both designated items in quantities costing at least \$10,000 per year.

#### C. Local Governments

RCRA Section 6002 provides that local agencies that receive federal funds and that use these funds to procure designated items in quantities of \$10,000 or more annually are subject to CPG V. For purposes of this analysis, EPA assumed that 1,900 local governments would be affected. Because EPA does not have direct information to indicate the number of local governments that currently would fit this criteria, the Agency based its assumption on the amount of federal funds dispersed to local governments, as reported in the Consolidated Federal Funds Report for Fiscal Year 1992.

The Consolidated Federal Funds Report provides information on the distribution of federal funds. The initial report that EPA used in the first CPG listed that 1,900 local governments received over \$10 million in federal assistance funding in fiscal year 1992. Of the remaining local governments, 3,125 received \$1 million or less in federal funds. For purposes of this analysis, EPA assumed that the 1,900 local governments receiving over \$10 million would procure some of both items proposed for designation in



CPG V in quantities of more than \$10,000 annually. EPA recognizes that this estimate may over estimate the number of governments actually affected or the level to which they are affected.

#### D. Contractors

As part of fulfilling their contractual requirements, RCRA Section 6002 provides that contractors to federal, state or local agencies that use appropriated federal funds to procure a designated item, purchase such items with recovered materials content when purchasing \$10,000 or more of that item in a given year. EPA believes that there will be a minor cost to these contractors as a result of CPG V. However, EPA believes it is appropriate to allocate some contractor costs. Therefore, EPA assumed that 1,000 contractors would be affected. Since the number of designated items a contractor would purchase in any given year is also uncertain, EPA assumed two items being used as the best, most conservative estimate.

### VIII. COST ANALYSIS METHODOLOGY

This section discusses EPA's methodology for developing its cost estimates for CPG V. In estimating costs, EPA assumed an average loaded cost of \$44.00 per labor hour, which represents a mid-level specialist, at a GS-12 grade level for the federal government.<sup>1</sup> EPA derived this estimate based on standard labor rates cited in past EPA Information Collection Requests (ICR). Subsection A discusses the general methodology for estimating costs. Subsection B discusses categories of costs, in general, that are expected to be incurred by procuring agencies. Appendices 1, 2, 3, and 4 provide summaries of estimated costs to federal agencies, states, local governments, and contractors, respectively.

#### A. General Methodology

Once EPA designates an item, each procuring agency is required to establish an affirmative procurement program within one year of the item designation. RCRA Section 6002(i) requires that an affirmative procurement program contain the following four elements: a recovered materials preference program; a promotion program; a program for requiring vendors to estimate, certify, and, where appropriate, reasonably verify the recovered materials contained in their product; and a program to monitor and annually review the effectiveness of the affirmative procurement program. In addition, RCRA Section 6002(d)(2) requires federal agencies responsible for drafting or reviewing specifications to revise their specifications to require the use of recovered materials to the maximum extent practicable. These revisions must be completed within one year of the final designation of an item.

In the CPG, EPA recommended that each procuring agency establish one overall affirmative procurement program that allows for the integration of new items as they are designated. According to the information provided in the FY 93 affirmative procurement program status reports submitted to the Office of Management and Budget's Office of Federal Procurement Policy, federal agencies are already following this approach for the previously-designated items. For the items proposed for designation in CPG V, EPA anticipates that federal and other procuring agencies will continue this practice and simply incorporate the items into their existing affirmative procurement programs. Since most procuring agencies already have established affirmative procurement programs, EPA is not attributing the full costs associated with

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<sup>1</sup> EPA estimated the labor rate using a 2003 Washington, DC, locality pay area, step 1, GS-12 (\$57,421) salary (see <[www.opm.gov](http://www.opm.gov)>), and a government overhead factor of 1.6.

establishing these programs to CPG V. Rather, EPA believes that procuring agencies will revise certain elements of their affirmative procurement programs, which may cause them to incur additional costs.

When EPA initially developed its cost estimate for CPG I in 1995, EPA assumed that 35 federal agencies, all 56 states and territories, 1,900 local governments, and 1,000 contractors would be affected by CPG. At the time, EPA received detailed cost estimates from six federal agencies who commented on the proposed cost estimates for the CPG program. These estimates included the likely costs of amending these agencies' existing affirmative procurement programs to include the items proposed for designation in CPG V.

In developing its estimates for the potential impact of CPG V on federal agencies, EPA again relied on the information initially submitted by these six agencies. EPA then used this information in estimating costs to the remaining 29 federal agencies. EPA's methodology for developing these estimates is presented in the individual cost category discussions below. For some cost categories, EPA based its estimates for the remaining 29 federal agencies on population data. In doing so, EPA determined that the average number of employees in each of the 29 remaining agencies is about 42,800 employees.

In CPG I, when EPA initially developed its proposed estimates of the costs of implementing the "buy recycled" requirements of the CPG, a few states commented that the estimates were understated. However, none of these state agencies provided information on their likely costs or information that would enable EPA to assess the reasonableness of the estimates made at the time of proposal. EPA became convinced in its discussions with federal agencies that states would indeed incur higher costs than EPA's initial proposed estimates. Therefore, EPA relied on the information submitted by the federal agencies to estimate costs likely to be incurred by state and local governments. In developing its estimates for state governments, EPA assumed that, for most cost categories, each state would incur costs similar to each federal agency because each state would have to conduct activities similar to those required of federal agencies. The exceptions are recordkeeping and reporting and specification revision. There is no statutory requirement for states to report their purchases of designated items or to revise their specifications to include recovered materials content requirements. However, EPA believes that, for some items, state governments will need to revise their specifications in order to comply with the CPG V requirements and has allocated costs to state governments for this activity.

When EPA initially developed its proposed estimates of local government costs for implementing CPG I, it did not receive comments. However, EPA believed it was appropriate to revise its cost estimates for local governments based on information received from and discussions with federal agencies. For this reason, EPA redefined its methodology for estimating costs to local governments. EPA again uses this redefined methodology for local governments, as discussed below, for CPG V.

When EPA initially developed its proposed estimates of contractor costs in CPG I, it did not receive comments regarding its estimates presented in the technical background document for the proposed CPG I. EPA reviewed the methodology it used to develop cost estimates for contractors presented in the technical background document for the proposed CPG I and concluded that the affirmative procurement program modification and verification activities were appropriately identified. For this reason, EPA's methodology for estimating contractor costs remained generally unchanged from its initial estimates. EPA again uses this methodology for estimating contractor costs for CPG V.

## B. Cost Components

EPA is dividing costs to procuring agencies into three major subsections. These subsections relate to the affirmative procurement program requirements of RCRA Section 6002(i). They are 1) rule review and implementation, 2) estimation, certification, and verification, and 3) recordkeeping and reporting. A summary of each requirement is presented below.

Some cost components (e.g., initial review) are incurred in the first year only, while others (e.g., verification and recordkeeping and reporting) are incurred on an annual basis. In presenting the total cost estimates for CPG V, all costs have been annualized over a 10-year period at a three percent discount rate. Formulas presented below demonstrate EPA's methodology for developing best estimates for each procuring agency. Details on the sensitivity analyses conducted are in Subsection 4 below.

Cost estimates to procuring agencies are presented in the following appendices to this document: federal agencies - Appendix 1; state governments - Appendix 2; local governments - Appendix 3; and contractors - Appendix 4.

### 1. Rule Review and Implementation

Rule review and implementation activities include reading and assessing CPG V; modifying an agency's affirmative procurement program; incorporating new requirements into existing agency policy documents; and executing these new policies. In presenting costs related to these activities, EPA further divided the rule review and implementation subsection into four areas: a) initial review; b) policy development, distribution, and implementation; c) training; and d) specification revision.

#### a. Initial Review.

Initial review activities include reading CPG V and developing a strategy for implementing its requirements. EPA estimates that total costs to procuring agencies to complete their initial review would be \$1.10 million. These costs are one-time costs and would be incurred in the first year only. Costs presented are the incremental costs of developing an implementation strategy for only the items proposed for designation in CPG V. Costs to develop an overall procurement guideline implementation strategy for all guideline items, including previously-designated items, are not allocated to CPG V. EPA's estimates for procuring agencies to complete initial review activities are as follows: federal agencies - \$354,100 and state governments - \$665,300. Costs to local governments for initial review are included in the costs for policy development, distribution, and implementation presented in Subsection 1.b below.

#### i) Federal Agency Costs

EPA assumed that all 35 federal agencies would incur costs for initial review. For the six agencies that provided data, EPA estimates that total initial review costs would be \$90,600. For the remaining 29 agencies, EPA estimates \$344,500 in total initial review costs. To estimate costs for the remaining 29 federal agencies, EPA developed the following formula:

$$270 \text{ hours per agency} \times 29 \text{ agencies} \times \text{labor rate } \$44 \text{ per hour} = \$344,500.$$

The number of hours per agency was developed by averaging the hourly estimates submitted by the federal agencies that provided data.

ii) State Government Costs

EPA assumed that all 56 state governments would incur costs for initial review. EPA used the following formula in developing initial review costs to state governments:

$$(\text{Total costs of } \$344,500 \text{ for non-reporting federal agencies} / 29 \text{ non-reporting federal agencies}) \times 56 \text{ state governments} = \$665,300.$$

iii) Local Government Costs

Costs to local governments for initial review are included in the costs for policy development, distribution, and implementation presented in Subsection 1.b below.

iv) Contractor Costs

For contractors and vendors, EPA anticipates that the initial review costs are negligible since affected government agencies would include requirements in their solicitations and contract documents for procurement of newly-designated items. Contractors would review those requirements while reviewing all other solicitation requirements.

b. Policy Development, Distribution, and Implementation.

Policy development, distribution, and implementation activities include 1) modifying an agency's affirmative procurement program; 2) developing and distributing policies implementing CPG V to affected activities; and 3) incorporating requirements to purchase designated items into existing agency documents.

EPA estimates that total costs to procuring agencies for policy development, distribution, and implementation in the first year would be \$4.79 million. These costs are one-time costs and would be incurred in the first year only. These costs are the incremental costs of modifying the agency's affirmative procurement program and developing and incorporating requirements and procedures for purchasing only the items proposed for designation in CPG V. Costs to develop an agency's overall affirmative procurement program and general procurement guideline implementing policies are not allocated to CPG V. EPA's estimates for procuring agencies to complete policy development, distribution, and implementation activities are as follows: federal agencies \$496,900; state governments - \$738,800; local governments - \$3.38 million; and contractors - \$176,000.

i) Federal Agency Costs

EPA assumed that all 35 federal agencies would incur costs for policy development, distribution, and implementation. For the six agencies that provided data, EPA estimates that the total costs for policy development, distribution, and implementation activities would be \$114,300. For the remaining 29 agencies, EPA estimates \$382,600 in total policy development, distribution, and implementation costs. Information provided by federal agencies indicated that the estimated costs of this activity tended to

increase with the size and the number of field components characteristic of the agency. To estimate costs for the remaining 29 federal agencies, EPA developed the following formula:

$$0.007 \text{ hours per employee} \times 29 \text{ agencies} \times \text{Average of 42,836 employees per agency} \times \text{labor rate of } \$44 \text{ per hour} = \$382,600.$$

This component uses agency population as a surrogate for size and complexity of federal agencies. The number of hours per employee was developed by adding the hourly estimates submitted by the six federal agencies that provided EPA with detailed cost estimates. This total was then divided by the total number of employees from those agencies.

ii) State Government Costs

EPA assumed that all 56 state governments would incur costs for policy development, distribution, and implementation. EPA used the following formula in developing policy development, distribution, and implementation costs to state governments:

$$(\text{Total costs of } \$382,600 \text{ for non-reporting federal agencies} / 29 \text{ non-reporting federal agencies}) \times 56 \text{ state governments} = \$738,800.$$

iii) Local Government Costs

EPA assumed that all 1,900 local governments would incur costs for initial review, policy development, distribution, and implementation, and specification review. In calculating these costs for local governments, EPA assumed that a national organization representing local governments would prepare a CPG V implementation package for use by local government officials in implementing the CPG V requirements. This CPG V implementation package would contain a synopsis of the requirements of the CPG V, sample policies and affirmative procurement programs, and references to national and other specifications that would facilitate the implementation of the CPG V requirements by local governments. EPA estimated costs for preparing this package using the following formula:

$$[270 \text{ hours for initial review} \times \text{labor rate of } \$44 \text{ per hour}] + [283 \text{ hours for specification revisions} \times 2 \text{ CPG items} \times \text{labor rate of } \$44 \text{ per hour}] = \$36,800.$$

Currently, under a grant from EPA, the U.S. Conference of Mayors provides information to assist local government officials in purchasing the previously-designated items. In the short-term, EPA will provide the U.S. Conference of Mayors with the necessary materials to enable it to provide its constituents with information on the items proposed for designation in CPG V. EPA will also work with other national organizations representing local officials in preparing information packages for their members. EPA also may work through a grantee to develop such a package and make it available to local officials through its RCRA Hotline. Should EPA provide the funding for developing this information package, EPA estimates that the costs presented in this section could be reduced.

In addition to the above costs, EPA estimates an additional 40 hours per local government will be required to tailor this package to meet the needs of their local agencies. In estimating these costs, EPA used the following formula:

40 hours per local government x 1,900 local governments x labor rate of \$44 per hour = \$3.34 million.

iv) Contractor Costs

EPA assumed that all 1,000 contractors would incur costs for policy development, distribution, and implementation. EPA estimates that each contractor would require two hours per item for this task. EPA used the following formula in calculating policy development, distribution, and implementation costs to contractors:

2 hours per contractor x 1,000 contractors x 2 items x labor rate of \$44 per hour = \$176,000.

c. Training

Training activities include training affected personnel on new policies and procedures developed to implement the CPG V. EPA estimates that total costs to procuring agencies to conduct training would be approximately \$17.9 million. These costs are one-time costs. Based on discussions with federal agencies, it is EPA's view that training would likely be conducted over a period of five years. These costs are the incremental costs of training appropriate personnel on only the items proposed for designation in CPG V. Costs to train personnel on overall affirmative procurement policies and procedures or pollution prevention programs are not allocated to the CPG V. EPA's estimates for procuring agencies to complete training activities are as follows: federal agencies - \$15.26 million; state governments - \$971,000; and local governments - \$1,672,000.

i) Federal Agency Costs

EPA assumed that all 35 agencies would incur costs for training. Using the detailed cost estimates of the six agencies that provided data for the original CPG, EPA estimated that the total costs for training activities under CPG V to be \$2.06 million. For the six agencies that provided data, EPA estimates that the total costs for training would be \$1.55 million. For the remaining 29 agencies, EPA estimates \$502,900 in total training costs. Information provided by federal agencies indicated that the estimated costs of this activity tended to increase with the size of the agency. To estimate costs for the remaining 29 federal agencies, EPA developed the following formula:

0.0046 hours per employee per item x 29 agencies x 42,836 (for average number of employees per agency) x 2 items x labor rate of \$44 = \$502,900.

This component used agency population as a surrogate for size and complexity of federal agencies. The number of hours per employee per item was developed by adding the hourly estimates submitted by the six federal agencies who originally provided EPA with detailed cost estimates. This total was then divided by the total number of employees from those agencies, and again divided by 21 (i.e.; the number of items initially proposed for designation in the first CPG and upon which these six agencies based their estimates).

ii) State Government Costs

EPA assumed that all 56 state governments would incur costs for training. EPA used the following formula in developing training costs to state governments:

(Total costs of \$502,900 for non-reporting federal agencies / 29 non-reporting federal agencies) x 56 state governments = \$971,000.

iii) Local Government Costs

EPA assumed that local governments would incur costs for training. In calculating these costs for local governments, EPA assumed that one official in each of five departments within each local government would require training. EPA estimated that each official would require approximately two hours of training per designated item. Therefore, EPA used the following formula in calculating training costs for local governments:

10 hours per item (i.e., 2 hours per item x 5 departments) x 1,900 local governments x 1 local official per department x 2 items x labor rate of \$44 per hour = \$1,672,000.

iv) Contractor Costs

For contractors and vendors, EPA anticipates that the training costs are negligible since affected government agencies would include requirements in their solicitations and contract documents for procurement of designated items. Contractors would review those requirements while reviewing all other solicitation requirements.

d. Specification revision (including testing and evaluation)

Specification revision activities include reviewing and revising agency specifications to incorporate recovered materials content requirements. This includes 1) identifying and locating affected specifications for items designated in CPG V; 2) conducting performance reviews, in advance of an actual procurement, to determine if products containing recovered materials meet existing performance requirements (i.e., any costs incurred to compare recycled product performance to current performance requirements (specifications), including any necessary testing and evaluation); 3) revising specification provisions, as appropriate; and 4) completing the revision process.

EPA estimates that total costs to procuring agencies to review their specifications and incorporate the requirements of CPG V would be \$4.76 million. These costs are one-time costs only. Based on discussions with federal agencies, EPA believes that specification revision would be conducted over a period of five years. These costs are the incremental costs of reviewing and revising specifications for only the items proposed designation in CPG V. Costs to review and revise specifications to remove requirements specifying virgin materials only or excluding the use of recovered materials are not allocated to CPG V. Pursuant to RCRA Section 6002(d)(1), these revisions were to have been completed prior to issuance of the CPG (and, of course, CPG II, CPG III, CPG IV, and CPG V). As recommended by commenting federal agencies, costs to qualify vendors were not allocated to the CPG, CPG II, CPG III, CPG IV, or CPG V. EPA's estimates for procuring agencies to complete specification revision activities are as follows: federal agencies \$1,000,670 and state governments - \$1,394,600.

i) Federal Agency Costs

For six of the 35 federal agencies that could be significantly affected by the CPG V (i.e., the six agencies that provided data), EPA estimates that five will revise their specifications to incorporate



recovered materials content requirements. For these six agencies, EPA estimates that total specification revision costs would be \$278,500. For the remaining 29 agencies, EPA estimates approximately \$722,200 in total specification revision costs, based on the following assumptions. For most product categories, EPA estimates the potential time for a federal specification-writing agency to review and revise its product specifications would average 283 hours per product based on actual specification revision activities performed by one of the agencies that commented on the initial cost estimate for the CPG. Table 4 below presents a breakdown of potential costs associated with the non-reporting federal agencies for reviewing and revising specifications.

Table 4. -- Potential Specification Revisions for Non-Reporting Federal Agencies

Product Category	Number of Items	Total Number of Agencies Potentially Affected	Specification Review and Revision Time per Item (In Hours)	Total Category Costs
Landscaping Products	2	29	283	\$722,216

Note: The calculations would include an estimated 2,003 hours per product for review and revise product specifications if CPG V included road-related construction products, see footnote 2.

ii) State Government Costs

Although the statute does not require state governments to review and revise their specifications for designated items, EPA believes that for some items, state governments will need to revise their specifications in order to comply with CPG V requirements. EPA anticipates that these costs would be the incremental cost of incorporating these additional requirements into existing documents where procurement of designated items is a concern.

EPA assumed that all 56 state governments would incur costs for specification revision. EPA used the following formula in developing specification revision costs to state governments:

(Total costs of \$722,216 for non-reporting federal agencies / 29 non-reporting federal agencies) x 56 state governments = \$1,394,600.

iii) Local Government Costs

As with state governments, the statute does not require local governments to review and revise specifications for designated items. However, EPA believes that local governments may need to revise some specifications in order to meet CPG V requirements, and, as explained previously, include these costs in the cost estimates for policy development, distribution, and implementation presented in Subsection 1.b above.

iv) Contractor Costs

The statute does not require contractors to review and revise specifications. EPA did not estimate costs to perform these activities. For contractors and vendors, EPA anticipates that the specification revision costs are negligible because affected government agencies would include requirements in their solicitations and contract documents for procurement of items proposed for designation in CPG V. Contractors would review those requirements while reviewing all other solicitation requirements.

2. Estimation, Certification, and Verification

RCRA Section 6002(i)(C)(2) requires procuring agencies to establish procedures for estimating, certifying, and, where appropriate, verifying the amount of recovered materials utilized in the performance of a contract. RCRA Section 6002(c)(3) further provides “the contracting officer shall require that vendors (A) certify that the percentage of recovered materials to be used in the performance of the contract will be at least the amount required by applicable specifications or other contractual requirements and (B) estimate the percentage of the total materials utilized for the performance of the contract which is recovered materials.” In addition, Section 903 of Executive Order 13101 requires the elements of an affirmative procurement program to be included into the Federal Acquisition Regulation, including guidance on agency programs for estimation and certification.

Since the items proposed for designation in CPG V in essence are made from 100 percent recovered materials, procuring agencies would not need to obtain estimates, certifications, or verifications of the recovered materials content in the items. Therefore, EPA does not anticipate that there would be a cost to procuring agencies for establishing procedures for estimating, certifying, and verifying the amount of recovered materials utilized in the performance of a contract.

3. Recordkeeping and Reporting

Recordkeeping and reporting requirements apply to federal agencies only. Activities include obtaining or maintaining data on agency purchases of the items proposed for designation in CPG V and annually reporting such data to the Office of Federal Procurement Policy and the Federal Environmental Executive. RCRA Section 6002(g) requires the Office of Federal Procurement Policy to report to Congress every two years on the actions taken by federal agencies to comply with RCRA Section 6002. In developing this report, OFPP requests information and data from federal agencies regarding their affirmative procurement programs and related activities. The recordkeeping and reporting costs presented below are the likely costs that would be incurred by federal agencies to maintain and compile information for and complete the annual OFPP information request using the existing OFPP reporting format (i.e., the format used to collect information for fiscal years 1993 and 1994).

EPA estimates that annual costs to federal agencies to perform recordkeeping and reporting activities would be \$728,100. These costs are annual costs and would be incurred starting in Year 2. These costs are the incremental costs of maintaining records and reporting on the items designated in CPG V only. Total costs to report on an agency's compliance with Executive Order 13101 or general requirements of RCRA Section 6002 or total costs to report on an agency's overall affirmative procurement activities are not allocated to CPG V.

a. Federal Agency Costs

EPA assumed that all 35 agencies would incur recordkeeping and reporting costs. Using the detailed cost estimates of the six agencies that provided data for the original CPG, EPA estimated that the total costs for the recordkeeping and reporting activities under CPG V to be \$553,200. For the remaining 29 agencies, EPA estimates \$174,900 in annual recordkeeping and reporting costs. Information provided by federal agencies indicated that the estimated costs of this activity tended to increase with the size of the agency. To estimate recordkeeping and reporting costs for the remaining 29 federal agencies, EPA used the following formula:

$$0.0016 \text{ hours per employee per item} \times 29 \text{ agencies} \times \text{Average of } 42,836 \text{ employees per agency} \times 2 \text{ items} \times \text{labor rate of } \$44 \text{ per hour} = \$174,900.$$

This component uses agency population as a surrogate for size and complexity of federal agencies. The number of hours per employee per item was developed by adding the hourly estimates submitted by the six federal agencies that provided EPA with detailed cost estimates. This total was then divided by the total number of employees from those agencies, and again divided by 21 (i.e.; the number of items initially proposed for designation in the first CPG and upon which these six agencies based their estimates).

Based on information and data submitted by two federal agencies, EPA estimates that if OFPP revised the current format to request data on purchases made at and above the small purchase threshold and request only anecdotal information on small purchases and bankcard acquisitions, federal recordkeeping and reporting costs could be reduced by 75 percent.

b. State and Local Government and Contractor Costs

The statute does not require state and local governments or contractors to file reports on their purchases of products containing recovered materials. These entities, however, may be required to report on their compliance with all of the requirements of individual contracts and assistance agreements, perhaps including requirements to purchase designated items. Relative to the overall burden to report on compliance with all aspects of the contracts and assistance agreements, EPA anticipates that the incremental effort to report on compliance with the requirements to buy designated items would be negligible.

## IX. PRODUCT COST

Another potential cost of CPG V is the possible price differential between an item made with recovered materials and an equivalent item manufactured using virgin materials. As discussed in the proposed CPG (59 FR 18859), relative prices of recycled products compared to prices of comparable virgin products vary. In many cases, recycled products may be less expensive than their virgin

counterparts. In other cases, virgin products may have lower prices than recycled products. However, other factors can also affect the price of virgin products. For example, temporary fluctuations in the overall economy can create oversupplies of virgin products, leading to a decrease in prices for these items. Under RCRA Section 6002(c), procuring agencies are not required to purchase a product containing recovered materials if it is only available at an unreasonable price. However, the decision to pay more or less for such a product is left to the procuring agency.

## X. REGULATORY FLEXIBILITY ANALYSIS

The primary purpose of the Regulatory Flexibility Analysis is to identify if there is an adverse impact to small businesses that are directly regulated by CPG V and to examine regulatory alternatives that fall within the scope of the statutory requirements that would reduce impacts to small businesses, small organizations, or small governmental jurisdictions subject to the regulation. The RCRA procurement requirements apply to procuring agencies that procure more than \$10,000 of a designated item. No exemption is included in the statute for small businesses. Therefore, EPA has decided that alternative regulatory approaches for small businesses are not appropriate for CPG V.

With regard to possible impacts to small businesses, there may be both positive and negative impacts to individual businesses. EPA anticipates that CPG V will provide additional opportunities for small recycling businesses to begin supplying recovered materials to manufacturers and products made from recovered materials to procuring agencies. In addition, other small businesses that do not directly contract with procuring agencies may be affected positively by the increased demand for recovered materials. These include small businesses involved in materials recovery programs and materials recycling. Municipalities that run recycling programs are also expected to benefit from the increased demand for certain recovered materials.

EPA is unable to determine the number of small businesses that may be adversely affected by CPG V. It is possible that if a small business that currently supplies products to a procuring agency uses virgin materials only, CPG V may reduce its ability to compete for future contracts. However, CPG V will not affect existing purchase orders, nor will it preclude businesses from adapting their product lines to meet new specification or solicitation requirements for products containing recovered materials. Thus, many small businesses that market to procuring agencies have the option to adapt their product lines to meet specifications.

## XI. LIMITATIONS

As stated above, EPA did not have specific data from which to develop its cost estimates for state and local governments and contractors. Although several states initially commented on the proposed CPG I and said that EPA's proposed estimates of the costs of implementing the CPG were understated, none of these commenters provided data supporting their comments. In addition, no comments were submitted by potentially-affected local governments or contractors. Furthermore, EPA to date has not received cost data during the comment period of any subsequent CPG proposal.

Based on its discussions with federal agencies, EPA determined that state and local governments would most likely incur higher costs than EPA's proposed estimates. Therefore, EPA relied on the

information submitted by the federal agencies, Census data, and, in some instances, EPA's own judgement, in adjusting its estimating factors in order to determine the potential costs of CPG V on state and local governments and contractors.

# APPENDIX 1. -- SUMMARY OF COSTS TO FEDERAL AGENCIES

Costs to Federal Agencies (2 Products)					
Requirement	Reporting Defense Agencies	Reporting Civilian Agencies	Remaining Agencies	Reporting Agencies	Civilian Agencies
Initial Review (First Year Only)	\$4,488	\$5,126	\$344,520	\$9,614	\$349,646
Policy Development, Distribution, and Implementation (First Year Only)	\$88,242	\$26,070	\$382,611	\$114,312	\$408,681
Training (Total Over First 5 Years Only)	\$1,521,124	\$32,758	\$502,860	\$1,553,882	\$535,618
Specification Revision (Total Over First 5 Years Only)	\$70,884	\$207,570	\$722,216	\$278,454	\$929,786
Verification (Total Every 3 Years Beginning in Year 2) <sup>2</sup>	\$0	\$0	\$0	\$0	\$0
Recordkeeping and Reporting (Annual Beginning in Year 2)	\$493,284	\$59,950	\$174,908	\$553,234	\$234,858

	Total Annualized Costs (2 Products)	
	With Recordkeeping and Reporting	Without Recordkeeping and Reporting
Defense Agencies	\$493,284	\$181,498
Civilian Agencies	\$234,858	\$243,659

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<sup>2</sup>Since the items proposed for designation in CPG V in essence are made from 100 percent recovered materials, procuring agencies would not need to obtain estimates, certifications, or verifications of the recovered materials content in the items. Therefore, EPA does not anticipate that there would be a cost to procuring agencies for establishing procedures for estimating, certifying, and verifying the amount of recovered materials utilized in the performance of a contract.



## APPENDIX 2. -- SUMMARY OF COSTS TO STATE GOVERNMENTS

Costs to State Governments (2 Products)	
Requirement	Costs
Initial Review (First Year Only)	\$665,300
Policy Development, Distribution, and Implementation (First Year Only)	\$738,800
Training (Total Over First 5 Years Only)	\$971,000
Specification Revision (Total Over First 5 Years Only)	\$1,394,600
Verification (Total Every 3 Years Beginning in Year 2) <sup>3</sup>	\$0

TOTAL ANNUALIZED COSTS - \$413,800

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<sup>3</sup>Since the items proposed for designation in CPG V in essence are made from 100 percent recovered materials, procuring agencies would not need to obtain estimates, certifications, or verifications of the recovered materials content in the items. Therefore, EPA does not anticipate that there would be a cost to procuring agencies for establishing procedures for estimating, certifying, and verifying the amount of recovered materials utilized in the performance of a contract.



### APPENDIX 3. -- SUMMARY OF COSTS TO LOCAL GOVERNMENTS

Costs to Local Governments (2 Products)	
Requirement	Costs
Initial Review, Policy Development, Distribution, and Implementation, and Specification Revision (First Year Only)	\$3,381,000
Training (Total Over First 5 Years Only)	\$1,672,000
Verification (Total Every Three Years Beginning in Year 2) <sup>4</sup>	\$0

TOTAL ANNUALIZED COSTS - \$721,500

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<sup>4</sup>Since the items proposed for designation in CPG V in essence are made from 100 percent recovered materials, procuring agencies would not need to obtain estimates, certifications, or verifications of the recovered materials content in the items. Therefore, EPA does not anticipate that there would be a cost to procuring agencies for establishing procedures for estimating, certifying, and verifying the amount of recovered materials utilized in the performance of a contract.

#### APPENDIX 4. -- SUMMARY OF COSTS TO CONTRACTORS

Costs to Contractors	
Requirement	Costs
Policy Development, Distribution, and Implementation (First Year Only)	\$176,000
Verification (Total Every Three Years Beginning in Year 2) <sup>5</sup>	\$0

TOTAL ANNUALIZED COSTS - \$20,000

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<sup>5</sup>Since the items proposed for designation in CPG V in essence are made from 100 percent recovered materials, procuring agencies would not need to obtain estimates, certifications, or verifications of the recovered materials content in the items. Therefore, EPA does not anticipate that there would be a cost to procuring agencies for establishing procedures for estimating, certifying, and verifying the amount of recovered materials utilized in the performance of a contract.